

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A method of immunizing a vertebrate against a virus selected from an influenza virus and a rotavirus, said method comprising administering to a vertebrate a composition consisting essentially of a plurality set of the same plasmid vectors in a physiologically acceptable medium, the plasmid vectors comprising DNA encoding an influenza virus antigen or a rotavirus antigen operatively linked to DNA which is a promoter, whereby a protective immune response comprising a humoral immune response, a cell-mediated immune response, or both is elicited against the antigen, to protect the vertebrate against a subsequent infection by an influenza virus or a rotavirus.
2. (Previously presented) The method of Claim 1, wherein the promoter of the plasmid vectors is of nonretroviral origin.
3. (Previously presented) The method of Claim 1, wherein the promoter of the plasmid vectors is of retroviral origin.
- 4-5. (Canceled)
- 6 (Previously presented) The method of Claim 1, wherein the virus is an influenza virus.
7. (Previously presented) The method of Claim 6, wherein the antigen is an influenza virus hemagglutinin.
8. (Previously presented) The method of Claim 1, wherein the virus is a rotavirus.
- 9.-10. (Canceled)

11. (Original) The method of Claim 1, wherein the vertebrate is a mammal.
12. (Previously presented) The method of Claim 11, wherein the mammal is a human.
13. (Previously presented) The method of Claim 1, wherein the composition is administered to a vertebrate through a route of administration selected from the group consisting of: intravenous, intramuscular, intraperitoneal, intradermal and subcutaneous.
14. (Previously presented) The method of Claim 1, wherein the composition is administered to a vertebrate by contacting the composition to a mucosal surface of the vertebrate.
15. (Currently amended) A method of immunizing a vertebrate against a virus selected from an influenza virus and a rotavirus, said method comprising administering to a vertebrate a composition consisting essentially of a plurality set of the same microsphere encapsulated plasmid vectors in a physiologically acceptable medium, the plasmid vectors comprising DNA encoding an influenza virus antigen or a rotavirus antigen operatively linked to DNA which is a promoter, wherein the composition is administered to a vertebrate by contacting the composition to a mucosal surface of the vertebrate, and whereby a protective immune response comprising a humoral immune response, a cell-mediated immune response, or both is elicited against the antigen, to protect the vertebrate against a subsequent infection by an influenza virus or a rotavirus.
16. (Currently amended) A method of immunizing a vertebrate against a virus selected from an influenza virus and a rotavirus, said method comprising administering to a vertebrate a composition consisting essentially of ~~two or more sets~~ a mixture of plasmid vectors in a physiologically acceptable medium, each plasmid vector comprising DNA encoding an influenza virus antigen or antigens, or a rotavirus antigen or antigens operatively linked to DNA which is a promoter, whereby a protective immune response comprising a humoral immune response, a cell-mediated immune response or both is elicited against the antigen or antigens, to protect the vertebrate against a subsequent infection by an influenza virus or a rotavirus.

17. (Currently amended) A method of immunizing a vertebrate against a virus selected from an influenza virus and a rotavirus said method comprising administering to a mucosal surface of the vertebrate a composition consisting essentially of a plurality set of the same plasmid vectors in a physiologically acceptable medium, the plasmid vectors ~~vector~~ comprising DNA encoding an influenza virus antigen or a rotavirus antigen operatively linked to DNA which is a promoter region, thereby eliciting a protective immune response comprising a humoral or cell-mediated immune response, or both, against the antigen, whereby the vertebrate is protected from disease caused by a subsequent infection by the virus.

18. (Previously presented) The method of Claim 17, wherein the promoter of the plasmid vectors is of nonretroviral origin.

19. (Previously presented) The method of Claim 17, wherein the promoter of the plasmid vectors is of retroviral origin.

20. (Original) The method of Claim 17, wherein the mucosal surface is a respiratory mucosal surface.

21. (Original) The method of Claim 20, wherein the respiratory mucosal surface is a nasal mucosal surface.

22. (Original) The method of claim 20, wherein the respiratory mucosal surface is a tracheal mucosal surface.

23. (Currently amended) A method of immunizing a vertebrate against a virus selected from an influenza virus and a rotavirus, said method comprising administering to a vertebrate a composition consisting essentially of a plurality set of the same microsphere encapsulated plasmid vectors in a physiologically acceptable medium, the plasmid vectors comprising DNA encoding an influenza virus antigen or a rotavirus antigen operatively linked to DNA which is a promoter region, thereby eliciting a protective immune response comprising a humoral or cell-

mediated immune response, or both, against the antigen, whereby the vertebrate is protected from disease caused by a subsequent infection by the virus.

24. (Canceled)

25. (Previously presented) The method of Claim 17, wherein the virus is an influenza virus.

26. (Previously presented) The method of Claim 25, wherein the antigen is an influenza virus hemagglutinin.

27. (Previously presented) The method of Claim 17, wherein the virus is a rotavirus.

28.-29. (Canceled)

30. (Original) The method of Claim 17, wherein the vertebrate is a mammal.

31. (Original) The method of Claim 30, wherein the mammal is a human.

32. (Currently amended) A method of immunizing a vertebrate against a virus selected from an influenza virus and a rotavirus, said method comprising administering parenterally to the vertebrate a plurality set of the same plasmid vectors comprising DNA encoding an influenza virus antigen or a rotavirus antigen operatively linked to DNA which is a promoter region, wherein the plasmid vectors are administered with a gene gun, thereby eliciting a protective immune response comprising a humoral or cell-mediated immune response, or both, against the antigen, whereby the vertebrate is protected from disease caused by a subsequent infection by the virus.

33. (Previously presented) The method of Claim 32, wherein the route of administration is chosen from the group consisting of intramuscular, intradermal and subcutaneous.

34. (Previously presented) The method of Claim 32, wherein the promoter of the plasmid vectors is of nonretroviral origin.

35. (Previously presented) The method of Claim 32, wherein the promoter of the plasmid vectors is of retroviral origin.

36. (Canceled)

37. (Previously presented) The method of Claim 32, wherein the virus is an influenza virus.

38. (Previously presented) The method of Claim 37, wherein the antigen is an influenza virus hemagglutinin.

39. (Previously presented) The method of Claim 32, wherein the virus is a rotavirus.

40.-41. (Canceled)

42. (Original) The method of Claim 32, wherein the vertebrate is a mammal.

43. (Original) The method of Claim 42, wherein the mammal is a human.

44.-51. (Canceled)

52. (Currently amended) A method of immunizing a mammal against an influenza virus, said method comprising administering to the mammal a composition consisting essentially of ~~one or more sets~~ a mixture of plasmid vectors in a physiologically acceptable medium, each plasmid vector comprising DNA encoding an antigen of the influenza virus operatively linked to DNA which is a promoter and thereby eliciting a protective immune response comprising a humoral or cell-mediated immune response, or both, against the antigen, whereby the vertebrate is protected from disease caused by a subsequent infection by the influenza virus.

53. (Currently amended) The method of Claim 52, wherein the ~~composition comprises two or more mixture of~~ plasmid vectors, ~~each comprising~~ comprises DNA encoding a different antigens ~~antigen~~ of an influenza virus operatively linked to a promoter.

54. (Original) The method of Claim 53, wherein the different antigens are from different subtypes of influenza.

55. (Original) The method of Claim 53, wherein the different antigens are from different subgroups of influenza.

56. (Original) The method of Claim 53, wherein the different antigens are from different subgroups and different subtypes of influenza.